

1837
LIST OF PRICES, &c.
LABORATORY OF SCIENCE.

List of Prices of

**MAGNETICAL, PHILOSOPHICAL, OPTICAL,
AND CHEMICAL**

INSTRUMENTS AND APPARATUS,

MANUFACTURED BY

EDWARD M. CLARKE,

MAGNETICIAN.

(Late of No. 9, Agar Street, Strand,)

No. 11, LOWTHER ARCADE,

Opposite the Adelaide Gallery of Practical Science,

IN CO-OPERATION WITH

CHARLES CHEVALIER,

Ingénieur Opticien, Breveté par le Roi, &c. &c.

PALAIS-ROYAL, No. 163, GALERIE VALOIS à PARIS,

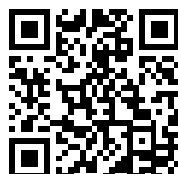
Is enabled to supply his Friends and the Public in general, with the latest Inventions and Improvements in Scientific Instruments and Apparatus, both British and French.

E. M. Clarke submits the following List of Philosophical Instruments with their prices to public inspection, and begs leave to state that, in addition to a theoretic knowledge of the principles of their formation and application, he possesses the mechanical capability of constructing them with his own hands, and really makes what he sells. His Workshops are at all times open to the inspection of Scientific persons who may have any invention in progress of practical development, and he will be happy to afford any experimental assistance (Chemical or Mechanical) that may be required; for which his Laboratory and Workshops offer the most desirable facilities. It has been E. M. Clarke's endeavour to make each instrument answer as many experimental purposes as possible; being well aware that one of the greatest impediments to the pursuit of Science is the expense attending its investigations, and he invariably ascertains that every article will perfectly perform the duties for which it is intended before he delivers it to the purchaser. As the lowest possible cash price is stated for each article, E. M. Clarke cannot allow any discount.

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LIST OF PRICES, &c.

Fig. 1, *E. M. Clarke's Magnetic Electrical Machine*, including two Armatures, D fig. 1, and D fig. 4; Decomposition of Water Apparatus fig. 2; Voltaic Magnet fig. 7; Apparatus to show the ignition of platina wire fig. 6; Pair of Conductors R, S, fig. 1; Wire Holder to show different coloured sparks from various metals fig. 8; Single Break for obtaining the electrical current in one direction X fig. 1; Iron Wires to show combustion fig. 5; Adjusting Key, Lever, Extra Hooks, and Springs Q and O, fig. 1. The Magnetic Battery A fig. 1, weighs 12 lb. The Mahogany Cover H, fig. 12, contains a cupboard which holds all the above apparatus, and when placed on the bottom board Y, locks to the back board B. The cupboard being then directly over the armature of the machine prevents the multiplying wheel E being turned

12 12 0

Ditto, including the Intensity Armature D, fig. 1; Pair of Conductors R, S; Sponge Directors U, V; Single Break X; Decomposition of Water Apparatus fig. 2; Lever, Key, extra Hooks, and Springs to lock up as at fig. 12, same sized magnetic battery for medical electricity

10 10 0

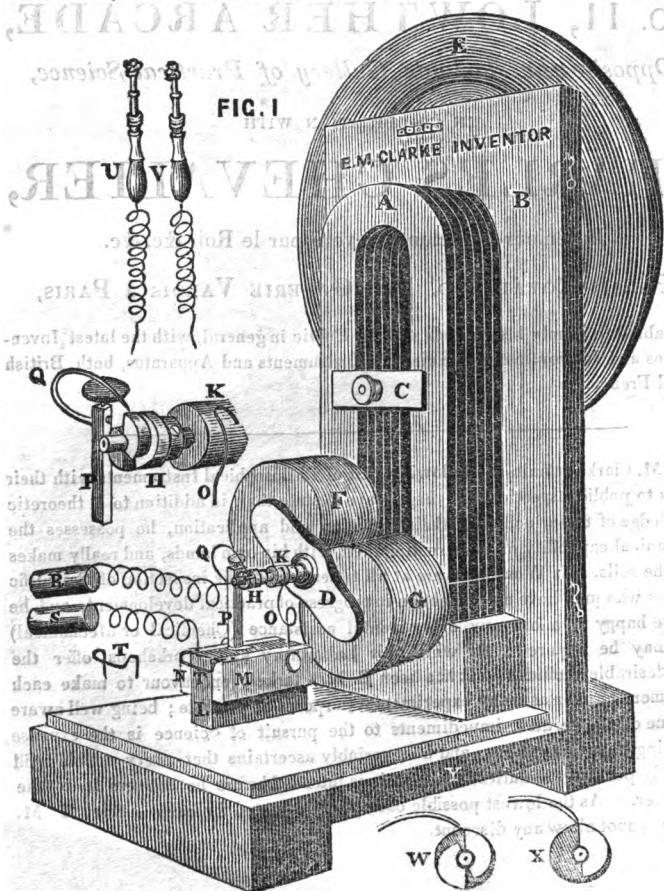


FIG. 4.

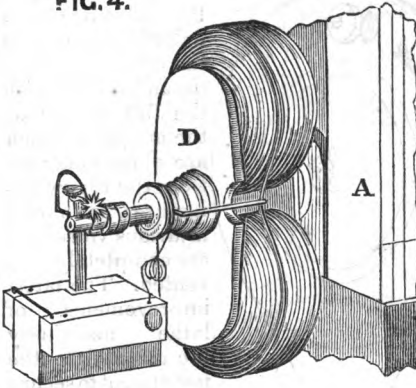


FIG. 2

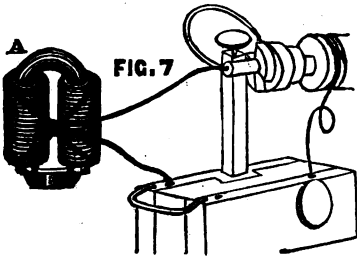
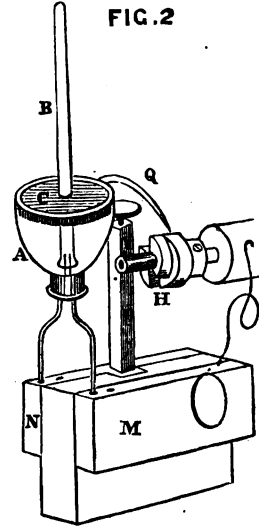


FIG. 7

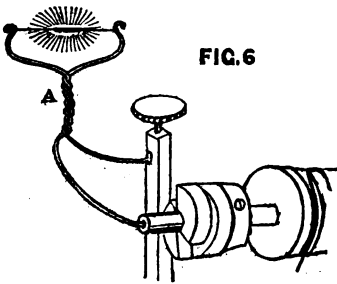


FIG. 6

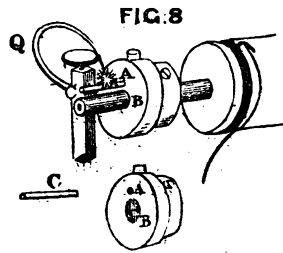


FIG. 8

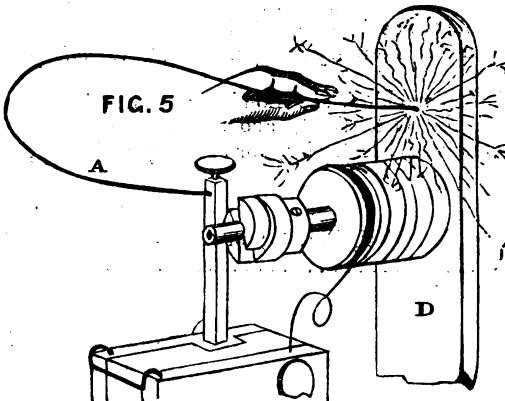


FIG. 5

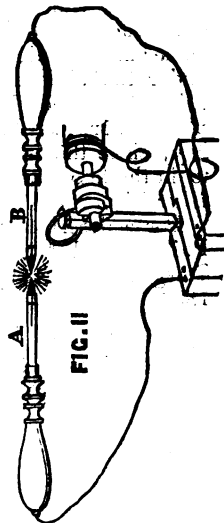
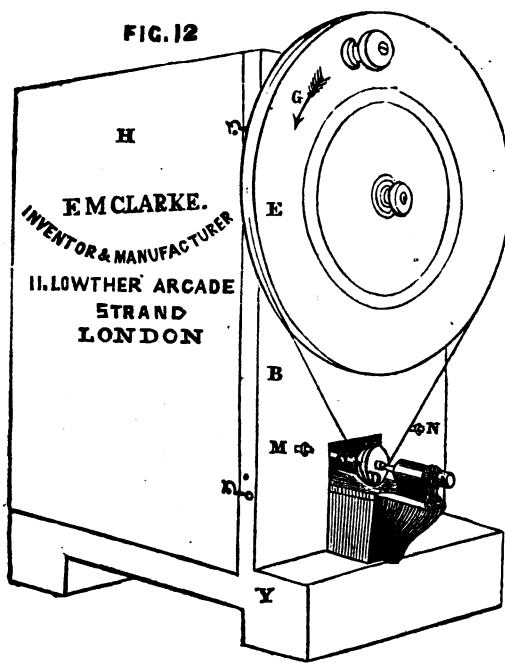


FIG. 11

FIG. 12



This Machine is the only one that exhibits separately the effects of *quantity* and *intensity* with the full power of the magnets, which are quite detached from the rotary armatures, so that all injurious vibrations are completely prevented. The latest improvements of lathe machinery are adapted to the instrument to secure the most perfect steadiness and freedom of motion. It requires no mercury flood, so that when once adjusted, it goes through its operations with ease and certainty. In addition to its power

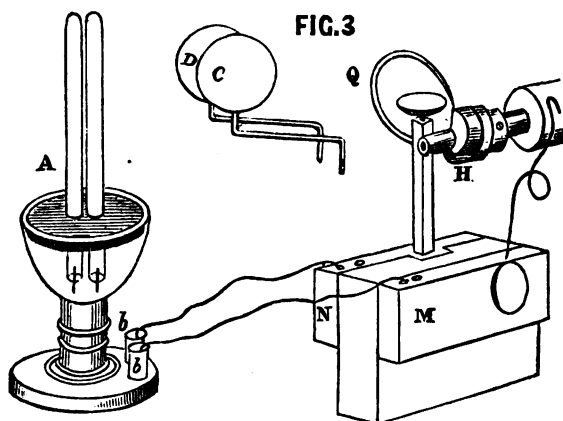
of producing light, heat, and motion, effecting chemical compositions and decompositions, and acting powerfully on the living nerves and muscles, it deflects the gold leaves of the electroscope, charges the Leyden jar, and ignites gunpowder.

"To medical gentlemen the instrument may be strongly recommended from the following advantages—its portability, its being always in a fit state of action, even in the dampest weather, the nicety by which the power of the shocks may be increased or diminished. Indeed it combines the advantages of the electrical machine and galvanic apparatus, at the same time that it does not labour under the disadvantages of either; for, as has already been stated, it is not affected like the former by a moist condition of the atmosphere; nor, like the latter, is it necessary to make use of any acids; nay, since the improvement has been effected, which is alluded to in the text, even the use of mercury is superseded." *Annals of Electricity*.

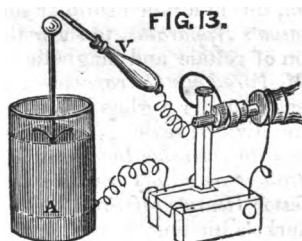
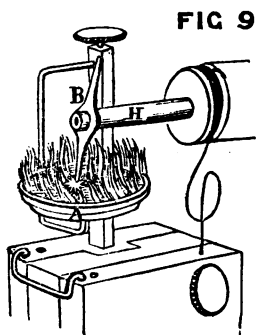
For a description of this machine, see London and Edinburgh Philosophical Magazine, for Oct. 1836, and June, 1837; and Sturgeon's Quarterly Annals of Electricity, for January and July, 1837.

£. s. d.

Sponge Directors for ditto, U and V, Fig. 1.; or Char-
coal Holders Fig. 11. 0 7 6

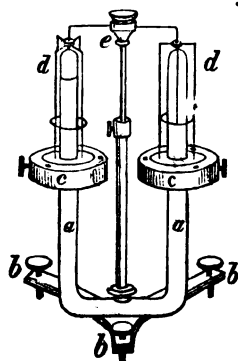


<i>Decomposition of Water Apparatus, for collecting the Gases, separate, for ditto, Fig. 3.</i>	0	10	6
<i>Pair of Platina Discs, for showing the decomposition of neutral salts, for ditto, C, D. Fig. 3.</i>	0	5	6
<i>Micrometer Eye Piece for showing the Magnetic Electrical Spectrum. Single, 5s. 6d. Double,</i>	0	8	6
<i>Mercury Cup and Points to show the disadvantage of the mercury flood. It also shows the combustion of mercury and ignition of æther, for ditto, fig. 9.....</i>	0	3	0



<i>Apparatus to show brilliant flashes of magnetic electricity on burnished gold or silver paper</i>	0	15	6
<i>Sturgeon's Apparatus to show the action of magnetic currents on two coils of insulated wire when moved vertically on the poles of ditto.....</i>	18	0	
<i>Thermo Electromotor for the mobile wire frames d, d, silver and platina.....</i>	5	0	
<i>E. M. Clarke's arrangement of the Magnets rotating round an electrified wire</i>	1	1	0
<i>Sturgeon's Apparatus to show. Ørsted's experiment of the deflection of the magnetic needle by a wire transmitting an electrical current above and below it</i>	10	6	

E. M. Clarke's Arrangement of the Vertical Cylindrical



<i>Magnet, with flood cups, leveling screws on tripod stand</i>	1	10	0
<i>Rotating Voltaic Magnet, and mercury flood for ditto</i>	0	10	0
<i>Pair of Ampere's Buckets, for ditto</i>	0	10	0
<i>Pair of Mobile Wire Frames to show rotation on the poles of ditto, by voltaic, magnetic, or thermo electricity</i>	0	5	0
<i>Sturgeon's Apparatus to show the rotation of a slip of rolled zinc in a circular trough of cast rough zinc round the poles of ditto</i>	0	15	0

Preston's "Apparatus to illustrate the effect produced on a freely suspended magnetic needle by the straight portion of an electrified wire. This contrivance affords the means of transporting the straight portion of an electrified wire all round the horizontal magnetic needle in directions parallel to one another, without interfering with its tendency towards the terrestrial magnetic poles"

1 3 0

E. M. Clarke's arrangement of Ersted's apparatus, possessing all the advantages of the electrical current passing above and below the needle, showing the dip, &c., but in a much simpler form

1 2 9

Sturgeon's Apparatus, to show the attraction and repulsion of voltaic and magnetic currents

17 6

Sir M. Faraday's Galvanometer, with Astatic Needles, suspended under a glass shade, leveling screws and engine divided scale

1 16 0

Ditto, with moveable Index for steadying the needles ..

2 0 0

Electro-dynamoscopes or Galvanometers from 10s. to

1 0 0

Professor Henry's soft iron Voltaic Magnets, with E. M. Clarke's binding screws, 4 coils of insulated wire 20 yards each

1 10 0

Ditto, larger, 8 coils of insulated wire 20 yards each ..

3 3 0

Small Voltaic Magnets from 5s. to

15 0

Sir M. Faraday's Apparatus to show the rotation of an electrified wire round the poles of a magnet

15 0

Ampere's Apparatus to show the rotation of a vertical bar Magnet on its axis

1 1 0

Apparatus to give powerful secondary shocks from a Single Voltaic Pair, with Callan's insulated helical coiled wires

4 4 0

Marshe's Vibrating wire

7 6

Barlow's Wheel to convert ditto into a rotatory motion

18 0

Sturgeon's Disc for ditto, large size

1 7 6

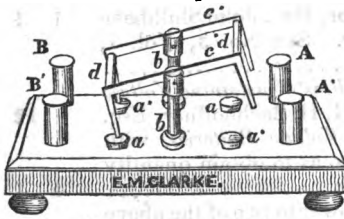
De la Rive's Floating Battery

5 0

E. M. Clarke's arrangement of ditto, being much lighter

7 6

E. M. Clarke's Electropeter. This instrument changes in



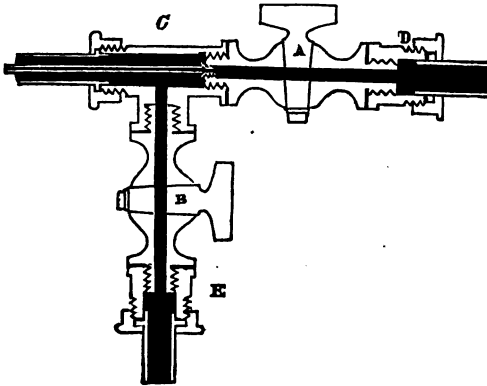
a moment the direction of Voltaic currents, or totally stops their passage, without the necessity as heretofore of removing and re-arranging the conducting wires by

hand. To Lecturers this instrument is of great utility, enabling them to show with rapidity and precision the changes that take place in the directions of electro-magnetic motions. See No. 1. Vol. I. of the

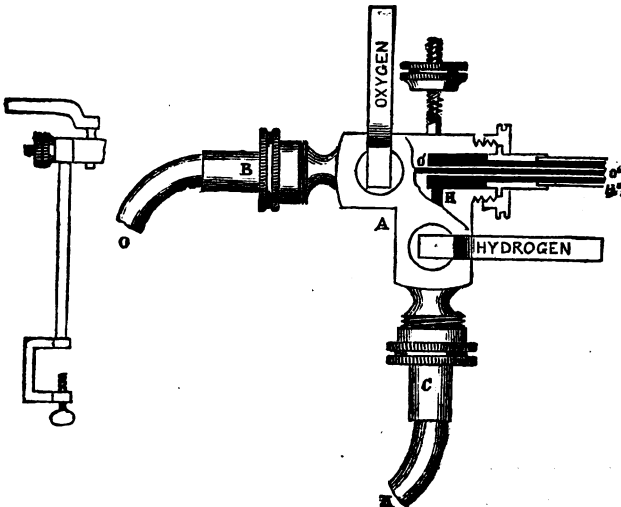
Annals of Electricity	1	1	0
Compound rectangular frames of Silver and Platina wires, to rotate by thermo-electricity, on a stand,	10	6	
Helical Coil wire for magnetizing steel needles by the induction of a Voltaic current.	1	0	
E. M. Clarke's Combined Apparatus to show the capacity of different metals for the development of magnetism by induction. A Horizontal Metallic Disc is made to rotate rapidly under a screen of glass, a magnetic needle being placed on a short point on the screen, the needle rotating with the disc. Also, when the compound magnets are made to rotate under the glass screen, and a disc of metal suspended over the screen, it rotates in the same direction with the magnets: also shows Harris's experiments of the influence of screens of different metals, in arresting the passage of mag- netic induction: also, Sir M. Faraday's experiment of rotating a disc of copper between the poles of a horse shoe magnetic battery on connecting conducting wires from a galvanometer; one with the centre, the other with the periphery of the rotating disc, a per- manent deflection of the needle is produced This apparatus is also quite applicable to very many useful purposes where a horizontal or vertical rotation is re- quired: for instance, it will show that a body in ro- tating rapidly about its axis always selects the shorter	10	0	0
Barlow's Sphere to show the probable electric origin of the phenomena of terrestrial magnetism. Sphere 12 inches diameter	3	13	0
Professor Henry's Helical wire coils for giving secondary shocks from a single voltaic pair, from £1. to	3	3	0
Rev. N. J. Callan's ditto ditto , from £2. 2s. to	4	4	0
Sturgeon's Apparatus for exhibiting the effect of mag- netic currents on different metals by vibrating me- tallic discs between the poles of a horse-shoe mag- netic battery. (This instrument has been improperly called a Magnetometer, but not by the inventor)	2	0	0
Mullins's Sustaining Voltaic Battery. By appointment of the inventor, F. W. Mullins, Esq.	1	1	0

<i>Shillibeer's Sustaining Voltaic Battery, and Pole Director.</i>			
By appointment of the inventor, Rev. John Shillibeer	1	1	0
<i>Ditto</i> , combined in any number. See No. 3, Vol. I,			
<i>Annals of Electricity</i>			
<i>Bachhoffner's Improvement of Mullins's Sustaining Voltaic</i>			
<i>Battery.</i> By appointment of G. H. Bachhoffner, Esq.	12	6	
<i>Box, containing Ten of the above Voltaic Batteries, with</i>			
<i>E. M. Clarke's arrangement so as to obtain quantity</i>			
<i>or intensity in a moment</i>	4	4	0
<i>Ditto</i> , of a larger size, equal in power to two of the above			
<i>boxes</i>	7	7	0
By permission of the Inventor, (Professor Hare, of			
Philadelphia) <i>Hare's Calorimeter.</i> This instrument			
requires no comment, its superiority being well known			
from £4. 4s. to	12	12	0
<i>E. M. Clarke's Box Voltaic Battery</i>	15	0	
<i>E. M. Clarke's Electro-Gasometer.</i> See No. 3. Vol. I,			
<i>Annals of Electricity</i>	1	10	0
<i>E. M. Clarke's Thermo-Voltameter, Ditto</i>	2	10	0
<i>E. M. Clarke's Apparatus for the decomposition of water,</i>			
<i>2-inch diameter</i>	10	6	
<i>Ditto</i> , 4-inch diameter, £1. 5s. <i>Ditto</i> , 7-inch diameter,			
<i>£1. 15s. Ditto</i> , 12-inch diameter	4	4	0
The advantages of this arrangement are obvious to			
any one who has been teased with bits of platina wires			
made to pass through small holes drilled in a glass vessel			
having loops turned on the projecting ends, and contact			
is obtained by merely placing the connecting wire in the			
loop: it was not only a bad connexion, but 9 cases out			
of 10 the cement that is used to fasten in the platina wires			
gave way, just as you were going to use the apparatus,			
as has frequently happened at lectures.			
<i>Apparatus of various descriptions to show the spark, give</i>			
<i>shocks, and decompose water, by thermo-electricity,</i>			
<i>from £1. to</i>	6	6	0
<i>E. M. Clarke's arrangement of the Plate Glass Electrical</i>			
<i>Machine, whereby positive and negative electricity</i>			
<i>can be obtained without the usual expense attendant</i>			
<i>on such machines. Plate 12 inches diameter, with</i>			
<i>jar and director</i>	5	5	0
<i>Singer's Gold leaf Electroscope as improved by E. M.</i>			
<i>Clarke</i>	15	0	
<i>Ditto, with parallel condensing plates.</i> This instrument			
shows the divergence of the gold leaves by magnetic			
electricity	2	0	0
<i>Ditto</i> of a larger size with spherical glass for the lecture			
<i>table</i>	2	12	6
<i>Open mouthed Leyden jars.</i> These jars take a much			
higher charge and are less liable to break by sponta-			
neous discharge than any other construction, A fig.			
13, from 2s. 6d. to	15	0	
<i>Dr. Kent's Electrical Mortar</i>	8	6	
<i>E. M. Clarke's Lightning plate or Thunder bolt</i>	1	1	0
<i>Coulomb's Torsion Electrometer</i>	2	0	0

<i>Charles's Electrical Sea Saw.</i> Motion is produced by a charged Leyden jar.....	12	6
<i>Cuthbertson's Grain Weight discharging Electrometer</i>	2	5 0
<i>Lane's discharging Electrometer</i>	6	8
<i>Henley's Quadrant Electrometer</i>	6	8
<i>Ditto Universal discharger and press</i> for voltaic or frictional electricity	1 10	0
<i>Magic picture for giving shocks</i>	6	6
<i>Electrophorus, suited for a Chemical Laboratory, from 15s. to</i>	1 10	0



<i>Professor Daniell's Oxy-hydrogen Blowpipe, with Maugham's Jets and Cary's Lime holder.</i> This instrument made as described in the Transactions of the Society of Arts, vol. L., and No. 3, of the Annals of Electricity	1	5	0
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<i>Ditto</i> , as improved by E. M. C. whereby he has removed the inconvenience occasioned by the use of so many separate parts, including stopcocks and four union joints. See No. 4, of the Annals of Electricity.	2	15	0
<i>Ditto</i> , in mahogany lock-up-case, with two large stout copper gas holders, funnel pipes, and stand for blow-pipe	12	12	0
<i>Improved Portable Hydro-oxygen Microscope.</i> This instrument is capable of showing objects, magnified on a medium from ten thousand to two million times; including objects, patent India rubber gas bags, hydrogen generator, and oxygen retort, from £16. to	36	0	0
<i>Clarke's thermometer.</i> By appointment of the Inventor, Sir Arthur Clarke, M. D.	2	2	0
<i>Chemical Retort and Lamp Stands</i> of all sizes, from 5s. to	2	10	0
<i>Pneumatic Troughs</i> of all sizes and constructions, from 7s. 6d. to	2	10	0
<i>E. M. Clarke's improved cast iron Mercurial Trough</i> with filling blocks and trays	1	15	0
<i>Plain cast iron Mercurial Trough</i>	0	15	0
<i>Iron Retorts</i> for making oxygen gas with moveable screw top.	0	12	6
<i>Lead Bottle and Purifier</i> for making hydrogen gas in large quantities. This apparatus is particularly adapted for inflating experimental balloons	1	10	0
<i>Chemical Stopcocks</i> that will stand the test of a high condensation, with brass bodies and gun metal plugs, and vice versa	0	4	0
<i>Male and Female connecting pieces</i> T's, L's } <i>Brass Caps</i> for retorts and air jars, all sizes } <i>Brass Jets, Blowpipes, Sockets, and Union</i> } <i>Joints</i> }	The Screws on these are all of the same size of the stopcocks.		
<i>Chemical Thermometers</i> to boiling point of mercury with hinged scale	0	16	4
<i>E. M. Clarke's arrangement of the Zinc Parabolic Mirrors</i> on stands for experiments, with radiant heat. The polish produced on zinc is far superior to silver, and by E. M. C's mechanical arrangements all possibility to oxidation is removed. This is a most perfect apparatus. <i>Mirrors</i> 12 inches diameter including iron ball and 3 adjusting stands	5	0	0
<i>Marcett's Steam Apparatus</i> with barometer and thermometer attached. This instrument E. M. C. makes of cast iron thereby doing away with the accidents by explosion which have occurred owing to the action of the mercury on the brass rendering it incapable of confining high pressure steam	3	13	6
<i>Glass Retorts, Receivers, Air Jars, Funnels, Syphons, Tubes, Graduated Measures, Spirit Lamps, Precipitating Glasses, Test Tubes, Flasks, &c.</i> per lb. . . .			
<i>Brass and Iron Retorts and Lamp Stands</i> of all sizes from 5s. to	2	10	0
<i>Superior Membrane Balloons</i> , from Paris, all sizes 7s. 6d. to	1	15	0

<i>plendid Electrical Rotations & Movements</i> by Zamboni's Electrical Piles. These highly interesting philosophical instruments illustrate in a pleasing and striking manner electrical attraction and repulsion, from 5 <i>l.</i> to	12	0	0
<i>Steam Engine Models</i> of all descriptions.			
<i>Opaque and Transparent Diagrams</i> for lecturers			
<i>Insulated Copper Wire</i> , of any required length from 20 to 1000 yards			
<i>Sulphate of Copper</i> for sustaining voltaic batteries, per lb.	0	1	0
<i>Muriate of Ammonia</i> for ditto, per lb.	0	1	6
<i>Nitrate of Mercury</i>			
<i>Nitrous, Sulphuric, and Muriatic Acids</i>			
<i>Mercury</i> , per lb.	0	5	0
<i>Agent</i> for the sale of Sturgeon's Annals of Electricity.			
<i>Ditto</i> for Higham's Patent Crystal Tablet for sharpening lancets, razors, pen knives, &c.			
<i>Ditto</i> for Alexander's Ventilating Eye Shade, for weak or irritable eyes, and has been approved of by Tyrell, Brodie, Cooper, Keate, Guthrie, and Quain	0	10	0
<i>Sole retail Agent</i> for Alexander's Graphic Mirror. The difficulties existing in the Camera Lucida are entirely obviated in this instrument, as the image of the object and point of the pencil are clearly seen at the same time, its adjustment simple, and its application no ways injurious to the sight, from 1 <i>l.</i> 15 <i>s.</i> to	2	10	0
<i>Portable Stands</i> for ditto	1	11	6
<i>Sole Agent</i> for England, Ireland, and Scotland of Dr. Schmidt's Medical Magnets			
<i>E. M. Clarke's Electro Magnetic Cabinet</i> , containing appa- ratus to exhibit the following interesting experi- ments, viz.: rotation of a mobile wire frame having an ascending or descending voltaic, magnetic-electrical, or thermo-electric current, round the pole of a fixed magnet. Marsh's improvement of Ampere's cylin- drical voltaic battery to show that when suspended on the pole of a magnet, that the zinc and copper elements rotate, and in contrary directions. Ritchie's rotating horizontal voltaic magnet, it also exhibits the magnetic electrical spark. Sturgeon's apparatus, consisting of a helical coil of fine wire on a hollow reel to exhibit the development of magnetic electrical currents. When the magnet is put within the coil a deflection of the galvanometer needle is produced; on withdrawing the magnet from the coil the def- lection is in the contrary direction. Coil of insulated wire to produce magnetism in steel needles, it also shows by placing a piece of soft iron within it the principle of the voltaic magnet. Apparatus to show that if a voltaic current is free to move, that it will set itself at right angles to the magnetic meridian, also the attraction and repulsion of voltaic and mag- netic currents. Bent bar of soft iron enveloped in a coil of insulated copper wire, and an armature to show the production of magnetism in iron by voltaic elec-			

tricity. Before the apparatus is connected with the calorimotor it is in a state of indifference as regards magnetism, but when the voltaic current passes through the calorimotor and the coil from the armature attached it will sustain from 15 to 20lbs. The apparatus to show the continued ignition of platina wire by Shillibeer's sustaining battery, a sulphur match can be readily lit by it. To exhibit the above experiments the following instruments are securely packed in a neat mahogany cabinet with lock and key. Two cylindrical bar magnets with armatures; Shillibeer's sustaining voltaic battery; Hare's spiral calorimotor; Ampère's cylindrical voltaic battery; mobile wire frame; Ritchie's rotating voltaic magnet; Sturgeon's wire coil; Cummin's galvanometer; voltaic magnet and armature; insulated wire helix; De la Rive's floating battery; thermomotor of copper and platina wire; platina wire apparatus. 3 5 0

E. M. CLARKE continues to receive the newest Fashions in French Optical Jewellery.

E. M. CLARKE begs to inform the public that he has added a Lecture Room to his Establishment, wherein it is his intention to have, at various times, Lectures upon the different branches of Natural Philosophy. As he proposes to confine each course to one particular subject, it will be evident that the matter treated of may be more fully developed than if the whole were embraced in one short course.

E. M. Clarke takes this opportunity of returning his grateful acknowledgments to those Ladies and Gentlemen who have honoured him with their presence during

MR. W. STURGEON'S LECTURES

ELECTRO-MAGNETISM AND MAGNETIC ELECTRICITY,

and to state that, in consequence of the great number of persons which he was compelled to disappoint on account of the class being limited to 40 persons, those Lectures will be resumed early in October.

E. M. Clarke has also made arrangements with several Gentlemen, eminent in different branches of Natural Philosophy, so as to keep up a succession of classes during the approaching season.

Prospectuses and further information of which, may be obtained by applying to him at his Establishment.

Printed by W. Annan, 12, Gracechurch-street.

